Abstract

TRACKING CIRCUIT ENABLING QUICK/ACCURATE RETRIEVAL OF DATA STORED IN A MEMORY ARRAY

An actual sense amplifier senses a signal received on a bit line to generate a bit, and

5   a latch latches the bit at a time point specified by a latch enable signal. A tracking circuit generates the latch enable signal in an appropriate time window. The tracking circuit may contain a dummy sense amplifier implemented similar to the actual sense amplifier and a dummy column from which the actual sense amplifier senses a signal received upon accessing the dummy memory array. The latch enable signal may be generated after the

10   dummy sense amplifier generates a bit representing the sensed signal. The time taken by the dummy sense amplifier to generate the bit depends on the load offered by the dummy memory array. Accordingly, the dummy memory array is designed to offer sufficient load to ensure that the latch enable signal is generated in an appropriate time window.